

Light Vehicle Construction

Surface Course: 25mm of AC6 Dense Surf Surface Course to Clause 9.4 compacted to a void content within the range 2%-10%.

* The Surface Course must be bonded to the Binder Course.

Binder Course: 100mm of AC20 Dense Bin Rec Binder Course to Clause 9.1 compacted to a void content within the range 2%-10%.

Sub-Base: 150mm of Type 1 sub-base to Clause 1.2. (NB where the CBR value of the sub-grade is below 1.5% an approved geosynthetic layer to Clause 6.7 will be required to be placed on the sub-grade).

* On certain sites the depth of topsoil may exceed 275mm. On such sites topsoil containing organic matter, roots, etc. shall be removed and replaced with Type 1 sub-base in accordance with Clause 1.2.

Carriageway Construction - Tarmac

Surface Course: Surface Course shall be 40mm of 10mm size Close Graded Surface Course (AC 10 close surf 70/100 or 100/150) to Clause 7.3. It must be compacted in accordance with Clause 7.2 to a void content within the range 2%-10%.

* The Surface Course shall be bonded to the Binder Course.

Binder Course: Binder Course materials shall be 20mm size recipe mix Dense Binder Course (AC 20 Dense bin 40/60 rec) to Clause 9.1 and shall be laid in a single layer or combination of layers not less than 50mm in thickness nor greater than 110mm in thickness. Compaction must be in accordance with Clause 7.2 to a void content within the range 2%-8% and all layers must be bonded together.

Sub-Base: Sub-base shall conform with Clause 8.1 and shall be Type 1. A minimum in-situ CBR value of 30% and/or a minimum stiffness of 35 MPa will be required on all roads. CBR or stiffness values shall be determined by Plate Bearing Tests or Light Weight Drop Tests respectively in accordance with Clause 8.2.

For carriageways and footways, not more than one in ten field dry density determination, as detailed in BS 1377:Part 9, (clause 2.2) shall be less than 90% of the maximum dry density for that particular sub-base as determined by the vibrating hammer test in BS EN 13286-4.

Carriageway Construction - Block Paving

Concrete blocks and clay pavers shall comply with Clause 10.2 and 10.3. They shall be laid in accordance with the requirements of BS 7533-3.

Herringbone bond pattern is required for all block paved areas other than when used as tactile paving. Only rectangular shaped blocks will be permitted. The layout of blocks/pavers and details at edges, manholes, gullies and other openings shall be as recommended by the supplier and agreed with the Highway and Flood Authority in advance of laying.

The developer may traffic the carriageway after the placement of the bituminous binder course across the full width of the carriageway provided that the thickness of the binder course is in accordance with the relevant Construction Chart.

When the block paver construction is to be completed prior to building being commenced then the thickness of the binder course layer quoted in Construction Chart 3 for roads up to 0.25 m.s.a. may be reduced to 60mm. The sub-base shall be correspondingly increased by 30mm in such cases.

Laying course (bedding) and jointing sand used in conjunction with small block pavers shall be in accordance with Clause 10.4.

Footway Construction

Surface Course: 25mm of 6mm size Dense 70/100 or 100/150 Surface Course (AC 6 dense surf) to Clause 9.4 compacted to a void content within the range 2%-10%.

* The Surface Course must be bonded to the Binder Course.

Binder Course: 100mm of 20mm size Dense, 70/100 or 100/150 Binder Course (AC 20 dense bin rec) to Clause 9.1 compacted to a void content within the range 2%-10%.

Sub-Base: 100mm of Type 1 sub-base to Clause 1.2

Construction Chart 1 - Non Pervious

Roads up to 0.25 msa. Normal flexible construction

SUB-GRADE (Note 1)	SUB-BASE (mm)		SURFACING (mm)		TOTAL THICKNESS REQUIRED (mm)	
Design CBR	Without Geotextile	With Geotextile	Binder Course (Notes 4 and 5)	Surface Course	Without Geotextile	With Geotextile
Below 1½% & soft spots	Not suitable	710 (Note 2 & 3)	110	40	Not suitable	860 (Note 2, 3 & 6)
1½%	Not suitable	440	110	40	Not suitable	590 (Note 6)
2%	400	340	110	40	550 (Note 6)	490 (Note 6)
3%	310	300	110	40	460 (Note 6)	450 (Note 6)
4% (Note 7)	300	300 (Note 7)	110	40	450 (Note 6)	450 (Note 6 & 7)
5% (Note 7)	300	300 (Note 7)	110	40	450 (Note 6)	450 (Note 6 & 7)
6% - 15% (Note 7)	300	300 (Note 7)	110	40	450 (Note 6)	450 (Note 6 & 7)
Above 15% (Note 7)	300	300 (Note 7)	110	40	450 (Note 6)	450 (Note 6 & 7)

Note 1: See Clauses 1.1.6, 1.1.7 and 1.1.8

Note 2: See Clause 1.1.6 - Assumes no improvement is possible using either sub-soil drainage or soil strengthening technique. 710mm is 410mm of 6F5 Capping Layer Granular Fill to clause 6.8 and 300mm of Type 1 sub-base. The thickness of 710mm can be reduced to 620mm if all Type 1 sub-base is used.

Note 3: For soft spots and sub-grades with a CBR of less than 1½% the geofabric shall be laid with an approved geogrid or shall be an approved geocomposite. Approved specialist design can be used with the agreement of the Authority.

Note 4: May be laid in one layer.

Note 5: Initial Binder Course layer thickness **70mm** if the **alternative kerbing installation method** (two stage construction kerbing to be laid at a later stage) is used. **Total Binder Course thickness becomes 130mm** in these circumstances. **See Clause 1.1.17.**

Note 6: Total thickness to be **increased by 20mm** above these values if the **alternative kerbing installation method** is used.
See Clause 1.1.17.

Note 7: The use of a geosynthetic with a sub-grade with this bearing capacity offers no advantage or economy.

Construction Chart 3 - Non Pervious

ROADS UP TO 0.25 msa. Block paver construction (See Clause 1.9)

SUB-GRADE (Note 1)	SUB-BASE (mm)		SURFACING (mm)			TOTAL THICKNESS REQUIRED (mm)	
Design CBR	Without Geotextile	With Geotextile	Binder Course	Laying Course	Block Paver	Without Geotextile	With Geotextile
Below 1½% & soft spots	Not suitable	710 (Note 2 & 3)	90	30	60	Not suitable	890 (Note 2 & 3)
1½%	Not suitable	440	90	30	60	Not suitable	620
2%	400	340	90	30	60	580	520
3%	310	300	90	30	60	490	480
4% (Note 5)	270	270 (Note 5)	90	30	60	450	450 (Note 5)
5% (Note 5)	270	270 (Note 5)	90	30	60	450	450 (Note 5)
6% - 15% (Note 5)	270	270 (Note 5)	90	30	60	450	450 (Note 5)
Above 15% (Note 5)	270	270 (Note 5)	90	30	60	450	450 (Note 5)

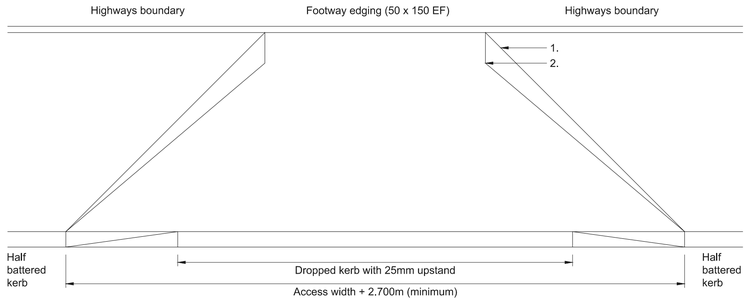
Note 1: See Clauses 1.1.6, 1.1.7 and 1.1.8

Note 2: See Clause 1.1.6 Assumes no improvement is possible using either sub-soil drainage or soil strengthening technique. 710mm is 410mm of 6F5 Capping Layer Granular Fill to clause 6.8 and 300mm of Type 1 sub-base. The thickness of 710mm can be reduced to 620mm if all Type 1 sub-base is used.

Note 3: For soft spots and sub-grades with a CBR of less than 1½% the geofabric shall be laid with an approved geogrid or shall be an approved geocomposite. Approved specialist design can be used with the agreement of the Authority.

Note 4: See clause 1.9.

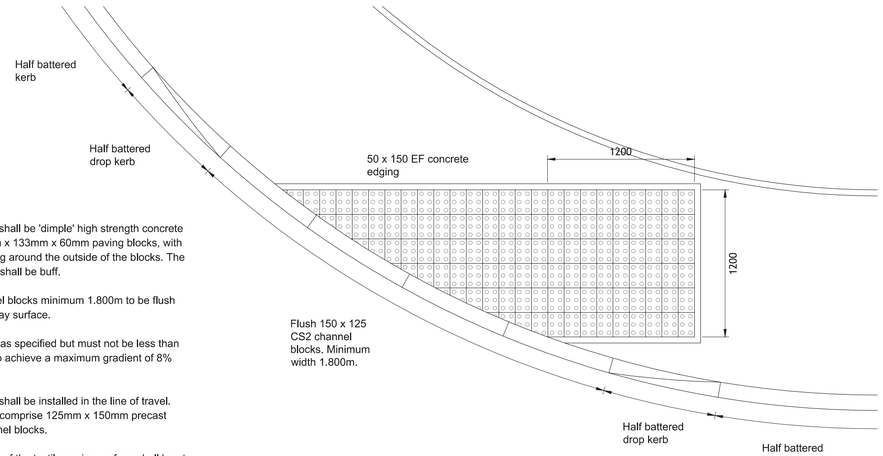
Note 5: The use of geosynthetic with a sub-grade with this bearing capacity offers no advantage or economy. Ref: BS7533 Guide for design of pavements constructed with clay or concrete block pavers.



Vehicular Crossing
(Scale 1:25)

Notes

1. Widths of dropped kerbs to be rounded to a whole number of kerbs.
2. Limit to be as 1. when D is 3.5m or less, as 2 when D is over 3.5m.
3. Ramped kerb to be replaced by dropped kerb if upstand kerbs are not used to define edge of carriageway.



Notes

1. Tactile paving shall be 'dimple' high strength concrete blocks, 200mm x 133mm x 60mm paving blocks, with concrete edging around the outside of the blocks. The surface colour shall be buff.
2. Central channel blocks minimum 1.800m to be flush with carriageway surface.
3. Variable width as specified but must not be less than that required to achieve a maximum gradient of 8% (1:12).
4. Tactile paving shall be installed in the line of travel. Flush kerbs to comprise 125mm x 150mm precast concrete channel blocks.
5. The back edge of the tactile paving surface shall be at right angles to the direction of crossing.

Typical Uncontrolled Crossing Point At Junction
(Scale 1:25)

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General Notes

1. Do not scale this drawing.
2. All dimensions are in millimeters unless stated otherwise.
3. This drawing is to be read in conjunction with all other relevant drawings & specifications.
4. All proprietary items to be installed in strict compliance with manufacturers instructions and recommendations.
5. No works shall commence on site until approval has been obtained from all relevant Agencies / Authorities.
6. All dimensions referred to in this drawing must be verified on site before commencing work of any kind.

Lincolnshire County Council Highways Notes

1. "The specification in all respects shall be in accordance with the current Lincolnshire Development Road and Sustainable Drainage Design Guide" and "Development Road and Sustainable Drainage Specification and Construction" publications in force in the county at the time of construction.
2. The minimum longitudinal fall for highways, without channel blocks shall be 1 in 150, and with channel blocks 1 in 250 (see Clause 10.1).
3. In addition, ensure that the first section of any side road falls away from the road from the road to which it is connecting. If general topography requires it to rise, this change of direction should take place after the first set of gullies. This is to ensure a 'false channel' with associated drainage problems is not created in the bellmouth of junctions.
4. "General deterioration of the existing highway/footway/verges created through construction of the new Section 38 Development will be reinstated to the current Development Road Specification at the developers' own cost at the agreement of the inspecting Highway Officer".
5. "All signs and line markings are to be agreed with the Senior Highways Officer prior to construction".
6. "No Private surface water shall discharge onto the adoptable highway"

Revision	Description	Date
P2	Drawing title revised. Block paving specification. Drawing redrawn.	08.11.2016
P1	First Issue	01.11.2016

PRELIMINARY

G30 CONSULTING
Unit 6, Neepsend Triangle Business Centre, 1 Burton Road, Sheffield, South Yorkshire, S3 8BW
W: www.g30consulting.com
E: enquiries@g30consulting.com
T: 0114 349 2720

Project
Seagate Homes,
Church Street, Holbeach, Lincolnshire

Title
Section 38 Construction Details
Sheet 1 of 2

Drawn by	Checked by	Paper Size
SG	SG	A1

Drawing Number	Revision	Scale	Date
05-0082-010	P2	As shown	01.11.2016